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Abstract : Tests were conducted in the NAL 1.2m trisonic wind tunnel on a 1/5th scale model of the LCA Stage V configuration. The tests included: (i) CCM position optimization, (ii) CCM nose shape optimization, (iii) vertical tail position optimization, (iv) determination of the longitudinal characteristics and (v) determination of trailing edge flap effectiveness. The tests were carried out in a Mach number range of 0.5 to 1.4 and over an angle of attack range which varied from -2 deg. to +24 deg. at M= 0.5 to -2 deg. to +11 deg. at M= 1.4.

The results showed that this configuration has slightly lower trimmed lift-to-drag ratio (with the C.G. located at 38.28% of MAC) compared to the Delta-5 configuration (with the C.G. located at 38.7% of MAC). The results further showed that this configuration suffers from an unacceptable pitch-up at transonic speeds and at moderate lift co-efficients.